

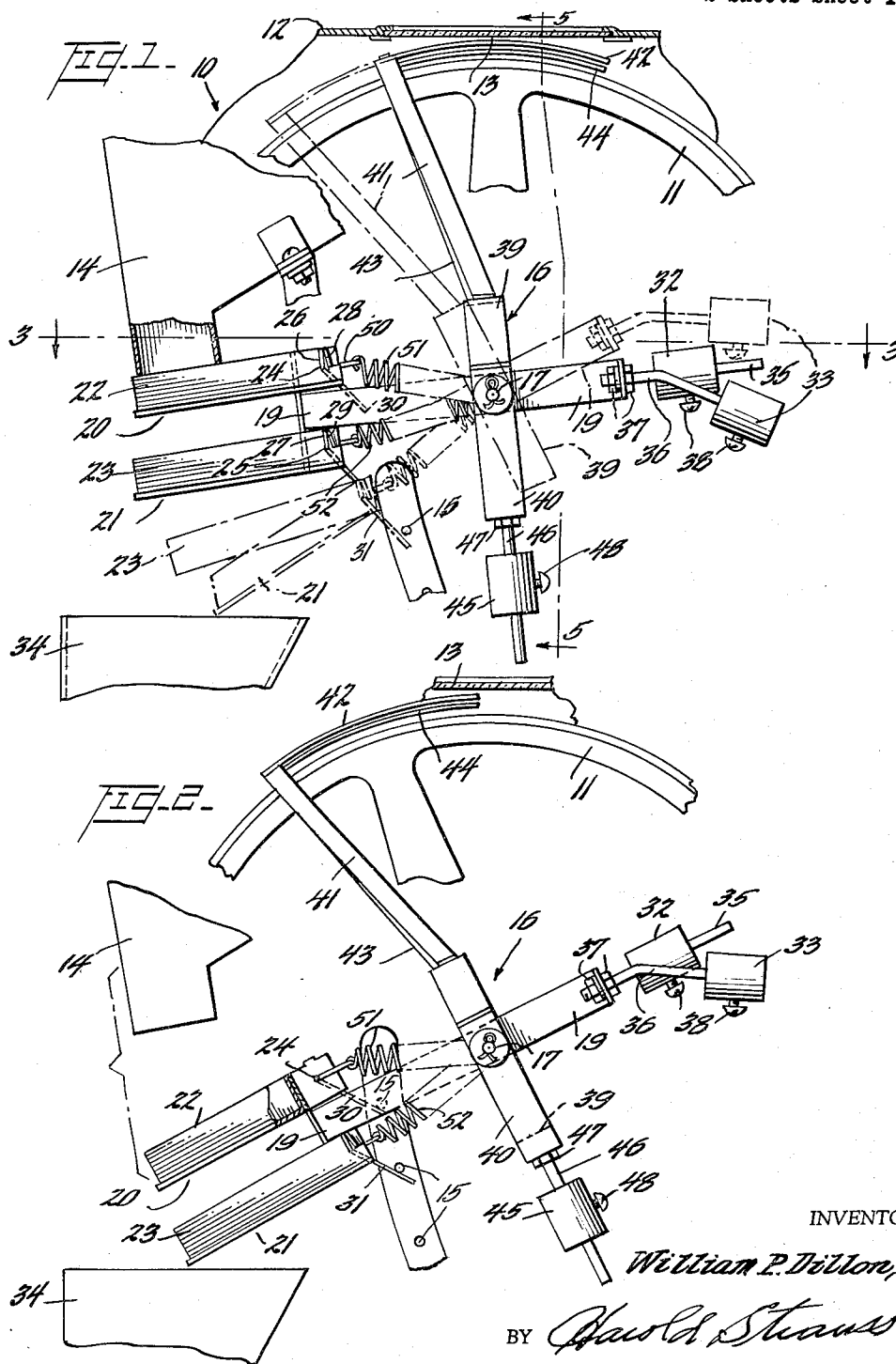
July 11, 1961

W. P. DILLON, JR
COIN OPERATED DEVICE

2,991,868

Filed March 31, 1959

2 Sheets-Sheet 1



INVENTOR

William P. Dillon, Jr.,

BY

David Strauss

ATTORNEY

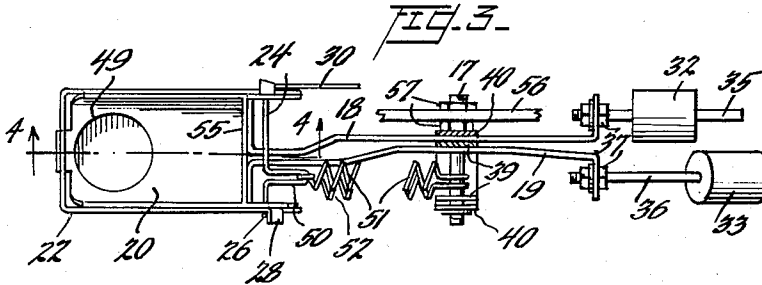
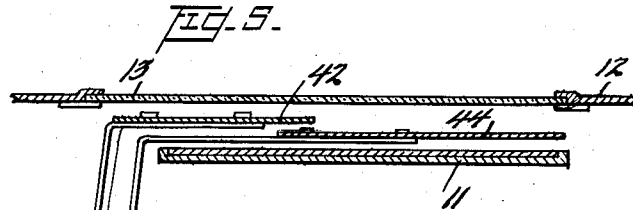
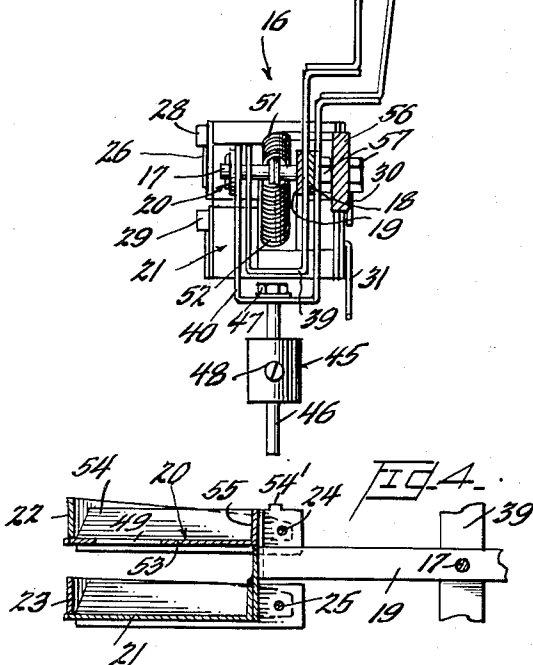
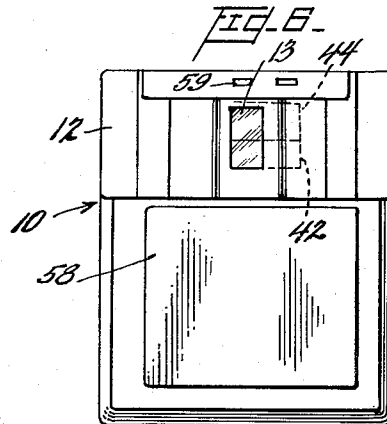
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COIN OPERATED DEVICE

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2 Sheets-Sheet 2



INVENTOR

William P. Dillon, Jr.

BY

David Stanes

ATTORNEY

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COIN OPERATED DEVICE
William P. Dillon, Jr., 3206 Grace St. NW.,
Washington, D.C.
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The present invention relates to mechanical coin-operated devices for purveying information and particularly to devices which can be operated by selection of coins to be deposited to convey either primary information or both primary and secondary information. The invention is particularly adapted to coin-operated weighing devices in which the primary information sought is weight and in which secondary information such as fortune and/or horoscope, etc. may be obtained, if desired.

In accordance with the invention, a coin-operated mechanism is provided comprising a pair of coin-holding pans superimposed one above the other and each supported on a counterbalanced lever arm mounted for pivotal movement, the pans being constructed so that upon reception in the upper pan if a coin is too large to pass through the upper pan into the lower pan, both pans will be swung by the weight of the coin to pivot both levers and thereby swing two shields out of position to reveal two items of information. On the other hand, if the coin is sufficiently small to pass through a coin opening in the upper pan, the coin will be deposited in the lower pan and only one of the levers will be pivoted to move only one of the information covering shields.

The invention will be more fully understood from the description which follows taken in conjunction with the accompanying drawings in which:

FIG. 1 is a partial elevation, partly in section, showing an illustrative coin-operating mechanism constructed in accordance with the invention, the components of an associated weighing device which cooperate with the coin-operating mechanism being included, this figure further showing in phantom the manner in which a small coin will operate the lever connected with the lower pan only;

FIG. 2 is a partial elevation, similar to that shown in FIG. 1, and illustrating the action which takes place when a large size coin is deposited, this coin being caught in the upper pan and being effective to cause the lever arms associated with both pans to be pivoted;

FIG. 3 is a cross-section taken on the line 3-3 of FIG. 1;

FIG. 4 is a cross-section taken on the line 4-4 of FIG. 3;

FIG. 5 is a cross-section taken on the line 5-5 of FIG. 1; and

FIG. 6 is a plan view of a weighing device constructed in accordance with the invention.

Referring more particularly to FIG. 1, the numeral 10 generically identifies a weighing device comprising a rotary scale 11 which carries weight and other information thereon, a housing 12 having a sight glass 13 positioned opposite a portion of the scale 11, a coin chute 14 which cooperates with a coin receptacle (not shown) on the housing and abutments 15 which are positioned to engage certain trip pins forming part of a coin-operating mechanism 16 which will be more fully described hereinafter. Supported by the housing 12 or the frame (not shown) which carries the same is a mounting shaft 17, the mounting shaft 17 supporting in pivotal manner the entire coin-operating mechanism 16.

Pivotaly carried by shaft 17 is a pair of pan-carrying levers 18 and 19 which carry coin-holding pans 20 and 21, respectively. The upper coin pan 20 extends beneath the lower end of coin chute 14 to receive whatever

coin is deposited. As will later more fully appear, the upper coin pan 20 is provided with an opening which passes small coins but not larger coins.

Each of the coin pans 20 and 21 includes a coin-trapping enclosure 22 and 23 pivoted to the inner end of the coin pans by shafts 24 and 25 which are formed with upturned ends 26 and 27 which bear against ears 28 and 29 on the enclosures 22 and 23. The other end of the shafts 24 and 25 form trip pins 30 and 31 which engage the abutments 15 carried by the weighing device 10 so that the enclosures 22 and 23 will be pivoted to release any coin therein after the levers 18 and 19 have been pivoted to move the information obstructing shields.

The levers 18 and 19 carry counterweights 32 and 33, respectively, at their forward end, these counterweights serving to balance the levers 18 and 19 in the absence of a coin carried in one of the coin pans 20 and 21. The counterweights 32 and 33 are secured to shafts 35 and 36 which are mounted by means of nuts 37 to flanges formed at the forward ends of the levers 18 and 19. Securement of the counterweights to the shafts is effected by means of set screws 38.

Secured to the levers 18 and 19 and also mounted upon shaft 17 are brackets 39 and 40, bracket 39 being secured to lever 19 and hence to the lower coin pan 21 and carrying shield supporting arm 41 and primary shield 42 and bracket 40 being secured to the lever 18 and hence to the upper coin pan 20 and carrying shield supporting arm 43 and secondary shield 44.

The bracket 40 carries a counterweight 45 upon a shaft 46 secured to the lower extremity of the bracket, securement of the shaft 46 to the bracket 40 being by means of nuts 47 and securement of the counterweight 45 to the shaft 46 being by means of set screw 48. The bracket 39 rests within bracket 40 as will later more fully appear and constitutes its own counterweight. Counterweight 45 and bracket 39 function to return levers 18 and 19 to horizontal position after a coin has been discharged into coin-collecting chute 34.

FIG. 1 illustrates by phantom lines the manner in which deposit of a small coin pivots the lower coin pan 21 moving only the primary shield 42. FIG. 2 illustrates deposition of a large coin to move both coin pans 20 and 21 and thereby remove both shields 42 and 44 from in front of the sight glass 13. The operation which takes place will be more fully discussed hereinafter.

The structure of the coin pans 20 and 21 and the parts which cooperate therewith will be more fully understood by reference to FIGS. 3 and 4. As will be seen, the upper coin pan 20 is formed with a coin opening 49. Assuming it is desired to have primary shield 42 operate upon deposition of a penny and both shields 42 and 44 to operate upon deposition of a larger coin (a nickel), the coin opening 49 will pass a penny but is too small to pass a nickel. Accordingly, deposition of a small coin will result in this coin passing through opening 49 and into lower coin pan 21 where it will move only the lower pan as shown in FIG. 1 to operate only primary shield 42. When a large coin is deposited it cannot pass through opening 49 hence the upper pan 20 is depressed. However, upper pan 20 rests upon lower pan 21 (or upon lever 19 which is secured to lower pan 21) so that both pans 20 and 21 are depressed as shown in FIG. 2.

The structure of the shafts 24 and 25 (these are identical) will be apparent from FIG. 3 where it will be seen that these shafts are formed with a U-shaped extension 50 which extends forwardly toward the mounting shaft 17. When trip pins 30 or 31 are moved, the U-extension moves away from the shaft 17 and springs 51 and 52 go into tension to help return the enclosures 22 and 23 into closed coin-trapping position. The springs 51 and 52

are not essential and gravity may be relied upon to close the enclosures 22 and 23.

FIG. 4 shows the details of the coin pans 20 and 21. As can be seen in FIG. 4, the upper coin pan 20 is formed with a lower wall 53, side walls 54 and a rear wall 55. The lower wall 53 is formed with the coin-opening 49. The rear end of the coin pan 20 is open and is closed by means of the U portion of the U-shaped enclosure 22. The side wall 54 which can be seen in FIG. 4 is formed with an ear 54' at its rear end, the purpose of the ear 54' being to limit the upward pivotal movement of the enclosure 22. The levers 18 and 19 are formed with upwardly and downwardly extending flanges respectively, these flanges being welded to the rear wall 55 of the pans 20 and 21, respectively. The securement between the flange of lever 19 and the lower pan 21 is apparent from FIG. 4. Securement of the rear wall 55 to the flange of lever 18 can be seen in FIG. 3.

The structure of the brackets 39 and 40 and their mounting upon the mounting shaft 17 as well as their securement to the levers 18 and 19 will be more apparent from FIGS. 3 and 5. In the form of the invention illustrated, the shaft 17 is supported upon a mounting bracket which is secured to the weighing device in a manner not shown, the mounting bracket being denoted by numeral 56, securement between the mounting bracket 56 and the shaft 17 being effected by means of nuts 57.

The nesting of bracket 39 within bracket 40 will be particularly apparent from FIGS. 3 and 5 and it will be seen that the lower U portion of the bracket 39 is thrust forwardly when the lower pan 21 is depressed, the weight of the lower portion of bracket 39 functioning as a counterweight. In this regard it will be appreciated that since bracket 39 nests within bracket 40 in the initial position of these brackets shown in FIG. 1, that a counterweight similar to the counterweight 45 cannot be secured to the lower end of bracket 39.

The general type of weighing device to which the present invention is particularly adapted is illustrated in plan view in FIG. 6 where it will be seen that the weighing device contains a sight glass 13 which one standing upon the weighing treadle 58 will be able to view by looking downwardly. By depositing a penny within the coin slot 59, the shield 42 will be swung away from the sight glass 13 so that information concerning weight, e.g., primary information, can be seen. When a nickel is deposited in the slot 59, both shields 42 and 44 will be swung away from the sight glass 13 thus revealing both primary and secondary information, e.g., weight and horoscope.

The over-all operation of the coin-operating mechanism of the invention will now be briefly stated. Assuming operation with a penny and a nickel as previously indicated, deposition of a penny in the slot 59 will cause the penny to slide down the coin chute 14 into the upper pan 20 where it will pass through the opening 49 in the coin pan 20 and thence into the lower coin pan 21. The weight of the coin will cause the lower coin pan 21 to be depressed thus pivoting lever 19 about shaft 17 to pivot bracket 39, thus swinging the supporting arm 41 to the left as seen in FIG. 1 and thereby swinging the primary shield 42 away from a position opposite the sight glass 13. Thus, the primary information on the scale 11 is revealed. When the lower coin pan 21 reaches its lowermost position, the trip pin 31 engages the abutment 15 to pivot shaft 25 and cause the upturned end 27 of the shaft 25 to bear against the ear 29, thus pivoting the enclosure 23 in the manner shown in phantom in FIG. 1. As the enclosure 23 moves upwardly, the coin slides out of the rear end of the pan 21 into the coin receiving chute 34. When the coin is removed from the lower pan 21, the balance of lever 19 is restored and the pan 21 returns to its initial position underlying the coin pan 22. In this way, the initial view-obstructing position of the primary shield 42 is restored.

When a nickel is deposited in the coin slot 59, the

nickel slides down the chute 14 into the coin pan 20. Since the nickel is larger than the coin opening 49, it remains in the coin pan 20 and causes the coin pan 20 to be depressed thereby pivoting lever 18 (lever 18 is immediately behind lever 19 and cannot be seen in FIG. 1). Since pan 20 rests upon lever 19 and lever 19 carries the lower pan 21, both pans are depressed and both levers 18 and 19 are pivoted as indicated in FIG. 2 thus pivoting both of the brackets 39 and 40 and swinging both of the shields supporting arms 41 and 43 to move both of the primary shield 42 and the secondary shield 44 away from the sight glass 13 to reveal both primary and secondary information. When the coin pan 20 is in its fully depressed position, the trip pin 30 engages the abutment 15 and the enclosure 22 is elevated in the same manner as the enclosure 23 was elevated as shown in FIG. 1 so that the nickel in pan 20 is permitted to slide out of the rear end of the pan and into the coin receiving chute 34. When the nickel is discharged, the balance of the levers 18 and 19 is restored and the coin pans 20 and 21 return to their initial position shown in FIG. 1 to restore both the primary shield 42 and the secondary shield 44 to their initial view-obstructing positions.

The invention is defined in the claims which follow.

I claim:

1. A coin-operating mechanism comprising a pair of pivotally mounted levers, a pair of movable shields, one of said pair of shields being connected with each of said levers for movement thereby, a pair of coin pans, one of said coin pans being secured to an end of each of said levers, said coin pans being positioned one above the other so that downward movement of the upper of said pans will cause a downward movement of the lower of said pans, the upper of said pans being formed with an opening for passing small coins deposited in said upper pan into said lower pan, said lower pan being free of said upper pan for independent movement so that a coin held in said lower pan will lower said lower pan without lowering said upper pan and means for ejecting a coin from said pans when said pans are in lowered position.
2. A coin-operating mechanism comprising a mounting shaft, a pair of levers pivotally mounted upon said shaft, a pair of movable shields, one of said pair of shields being connected with each of said levers for movement thereby, a pair of coin pans, one of said coin pans being secured to an end of each of said levers, said coin pans being positioned one above the other so that downward movement of the upper of said pans will cause a downward movement of the lower of said pans, the upper of said pans being formed with an opening for passing small coins deposited in said upper pan into said lower pan, said lower pan being free of said upper pan for independent movement so that a coin held in said lower pan will lower said lower pan without lowering said upper pan and means for ejecting a coin from said pans when said pans are in lowered position.
3. A coin-operating mechanism comprising a mounting shaft, a pair of levers pivotally mounted upon said shaft, a pair of shields, one of said pair of shields being connected by means of a supporting arm with each of said levers so that pivotal movement of said levers will swing the shield connected thereto, a pair of coin pans, one of said coin pans being secured to an end of each of said levers, said coin pans being positioned one above the other so that downward movement of the upper of said pans will cause a downward movement of the lower of said pans, the upper of said pans being formed with an opening for passing small coins deposited in said upper pan into said lower pan, said lower pan being free of said upper pan for independent movement so that a coin held in said lower pan will lower said lower pan without lowering said upper pan, means for ejecting a coin from said pans when said pans are in lowered position, and counterbalancing means connected with said levers for re-

storing said levers to horizontal position in the absence of a coin in one of said pans.

4. A coin-operating mechanism as recited in claim 3 in which U-shaped brackets secured to said levers and pivotally mounted upon said shaft are employed to interconnect said levers with the supporting arms which carry said shields.

5. A coin-operating mechanism as recited in claim 4 in which said U-shaped brackets are nested, one within the other, with the U portion thereof extending beneath said shaft.

6. In a device for purveying primary and secondary information and comprising a sight glass and means carrying information to be purveyed by visual observation through said sight glass, a coin-operating mechanism comprising a pair of pivotally mounted levers, a pair of movable shields normally obstructing portions of said sight glass, one of said pair of shields being connected with each of said levers for movement thereby to uncover a portion of said sight glass, a pair of coin pans, one of said coin pans being secured to an end of each of said levers, said coin pans being positioned one above the other so that downward movement of the upper of said pans will cause a downward movement of the lower of said pans, the upper of said pans being formed with an opening for passing small coins deposited in said upper pan into said lower pan, said lower pan being free of said upper pan for independent movement so that a coin held in said lower pan will lower said lower pan without lowering said upper pan, lowering of said pans being effective to move said shields to uncover portions of said sight glass, and means for ejecting a coin from said pans when said pans are in lowered position.

7. In a weighing device for purveying weight and secondary information and comprising a sight glass, coin-receiving means and means carrying weight and other information to be purveyed by visual observation through said sight glass, a coin-operating mechanism comprising a mounting shaft, a pair of levers pivotally mounted upon said shaft, a pair of movable shields normally obstructing portions of said sight glass, one of said pair of shields being connected with each of said levers for movement thereby to uncover a portion of said sight glass, a pair of coin pans, one of said coin pans being secured to an end of each of said levers, said coin pans being positioned one above the other so that downward movement of the upper of said pans will cause a downward movement of the lower of said pans, a coin chute communicating between said coin-receiving means and the upper of said pans, the upper of said pans being formed

with an opening for passing small coins deposited in said upper pan into said lower pan, said lower pan being free of said upper pan for independent movement so that a coin held in said lower pan will lower said lower pan without lowering said upper pan, lowering of said pans being effective to move said shields to uncover portions of said sight glass, and means for ejecting a coin from said pans when said pans are in lowered position.

8. An improvement as recited in claim 7 in which said pans are formed with open rear ends and are provided with U-shaped enclosures pivoted to the forward ends of said pans for holding coins within said pans, abutment means for pivoting said enclosures to open the rear of said pans when said pans are lowered and chute means for receiving coins ejected from said pans.

9. In a weighing device for purveying weight and horoscope information and comprising a sight glass, scale means for carrying at least information as to weight, said information being visible through said sight glass, a coin-operating mechanism comprising a mounting shaft, a pair of levers pivotally mounted upon said shaft, a pair of shields normally obstructing portions of said sight glass, one of said pair of shields being connected by means of a supporting arm with each of said levers so that pivotal movement of said levers will swing the shield connected thereto to uncover a portion of said sight glass and permit observation of information therethrough, a pair of coin pans, one of said coin pans being secured to an end of each of said levers, said coin pans being positioned one above the other so that downward movement of the upper of said pans will cause a downward movement of the lower of said pans, the upper of said pans being formed with an opening for passing small coins deposited in said upper pan into said lower pan, said lower pan being free of said upper pan for independent movement so that a coin held in said lower pan will lower said lower pan without lowering said upper pan, lowering of said pans pivoting said levers to swing said shields to uncover portions of said sight glass, means for ejecting a coin from said pans when said pans are in lowered position, and counterbalancing means connected with said levers for restoring said levers to horizontal position in the absence of a coin in one of said pans.

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